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acoma indians

LIVING IN HARMONY WITH A HARSH ENVIRONMENT

The huge honey colored rock reaches up into the deep blue New Mexico sky with the adobe houses and the great adobe Church of St. Estefan crenellating the rim. Climb 400 feet in the blazing sun up the steep winding road to the top of the mesa and step inside the cool, adobe tourist office: welcome to the sky-high city of Acoma, oldest continuously inhabited community in the United States, over 2,000 years according to the latest (1970) archaeological datings. The word 'Acoma' or 'acu' denotes "a place that always was", in the sense of home or even an eternal resting place. Here you are suddenly in another world, another time zone, hundreds of miles or years remote from the America you left a few hours ago on the highway.

Isolated in a harsh desert of mesas and sagebrush and strangely sculptured rocks 25 miles north of route 40 between Gallup and Albuquerque, the Acoma Indians have preserved much of their traditional way of life in an unfriendly natural environment and in the face of over 400 years of encroachment and oppression by white invaders. Wherever else you go in the United States today, the Indian way of life has retrogressed or disintegrated. The one exception: the Pueblo Indians, of whom the Acomas are a part. No changes in the past 400 years have altered the totality of Pueblo life in its

rhythms, social manners, religious or social organizations. (John Collier: The Gleaming Way.) Where did they come from? Probably they are descended from the Anasazi, "the ancient ones", whose stone ruins are scattered all over the area from Wupatkai to the Canyon de Chelly, before they learned to build with adobe. The Acomas themselves say they came from the Enchanted Mesa, a huge rock about three miles from their own mesa. Their language is Keresan, in common with many other tribes of the Southwest, and they are among the poorest of all Indians, with a per capita income of less than \$750 annually, according to the Office of Economic Opportunity.

White people may no longer wander at will through their ancient village. The fees visitors pay, of \$1.50 for a guided tour and \$1.50 for photo-taking, are now a principal source of income for the Acomas. A young Indian woman takes us from the tourist office, first to the huge old church of St. Estefan, built about 1629 of adobe and timber beams carried by hand from Mount Taylor thirty miles away. The first and only missionaries to the Acomas for over four hundred years have been the Franciscans, which seems to have been on the whole a harmonious relationship. Some Acoma families became Christian, some have preferred their traditional beliefs. But for most, it seems, there is a mingling of beliefs from both the Christian and the Indian. The old Church of St. Estefan is still used for special occasions--at Christmas, for weddings and St. Estefan's Day on September 2. This feast day is an example of the blending of Indian and Christian tradition and ceremony when the saint's statue is brought out of the

church and kept all day in a small house of boughs on the plaza where a special dance is performed in his honor. On this day, all comers are welcomed to Acoma, to share in the feasting and dancing.

In front of the church, in a large cemetery, Acomas bury their dead with simple traditional rites, which includes breaking a bowl of water over the grave. But no possessions are buried and there is no ancestor worship. For the Acomas time flows smoothly, evenly, with the seasons. They do not have what John Collier calls "our cutting edge of linear time". For them, he says, the past stays alive because it is not past but present. They adjust to change so that it is at home within the past, and the past moves gently towards an endless future. Lesley White relates the story that a "progressive" Acoma family wished to have their dead buried according to Catholic rites in the cemetery but that this was not allowed and the burial had to take place elsewhere.

Formerly several hundred Acomas lived atop the mesa, with offshoots in the nearby settlements of Acomita and McCarty's. Now, to fulfill religious ceremonies, there are only about seven families living in Old Acoma. These ceremonies are at the heart of the Acomas' life. If they follow the old traditions, men spend half their waking hours in religious ceremonies and practices. Their ceremonies and customs are still very much alive and the young people are more involved than ever before. This I learned in a letter from a Franciscan father last September, who had recently left Acoma, after living there 10 years sharing in their dances and sacred ceremonies and being adopted into a clan. Their religious practices are very elaborate and involved, reaching into every facet of life and culture, and serving social and esthetic needs too. Traditional religious songs and dances bring young people back to Acoma for certain special oc-

casions, such as the Rain Dance in July which lasts for four days. At the dances, costumes and masks are elaborately beautiful in great variety. When the medicine men work their healing, it is sometimes done with intricate sand paintings or special sacred bundles of corn. Prayer sticks, often cunningly carved and decorated, are owned and used by all adults. And to go out and cut a prayer stick involves much prior meditation--and you must pray to the tree and thank it for giving up its branch to you.

How closely knit are all the ways of their lives: social, religious, esthetic, healing, working. They are not fragmented as ours are, but blended as a whole together. Though families are a loosely knit unit, marriage must be within the tribe, which now numbers about 3,000 in all. But no one within the family is neglected: the old and the orphans are always cared for. It is quite common for young couples to live together before marriage. Illegitimate children are common also. There is no disgrace; mother and child are accepted and live with her family. The only complaints would come from economic hardships to the family.

Branching off from the central plaza are small streets of adobe houses, some two and three stories high, set back in terraces and reached by tall outside ladders. There are eight kivas, or sacred rooms, some for men, some for women. From the way our guide speaks of them, we gather they are as much social as religious. Up here there is no television, no electricity, no water conduits, because Acoma religious restrictions inhibit radical departure from traditional ways. The water supply is from two rock reservoirs at the edge of the village, replenished by rain water. Two muddy pools among the houses, where dogs cool themselves, are used for repairing adobe.

In front of many of the houses women sit

with displays of brightly colored pottery. They make it themselves without a wheel and work the intricate beautiful designs with different colored clays. Each Pueblo has its own distinctive style and the sale of pottery is an important part of their income. Some women also had fresh baked bread and pies, cooked in the conical "beehive" adobe ovens beside their houses. A delicious treat for campers long on the road!

For hundreds of years farming in the lands below the mesa was the chief occupation. Each day the people went down to tend their gardens of corn and squash and beans--the corn growing in small bright green bushes, quite different from our tall lanky Ohio variety. Down there they found water and were practicing irrigation with a skill which astonished the Spaniards over four hundred years ago. Now the building of the Bluewater Dam by the Reclamation Service further north on the Rio Grande has severely limited the water for irrigation, although some farming is still done. They raise some stock, but it takes 855 acres to produce enough food to feed a family of five. No longer can they grow the beautiful peaches that earlier settlers remarked on and which dried in the sun on their roof-tops. For all that is grown (and especially for corn) there are special religious ceremonies. Traditional methods of threshing are still used, with horses trampling the grain that is later gathered into baskets for winnowing in the wind.

Since the time the Spaniards came, the Acomas have had a dual system of government: one for affairs within the tribe, with a head man or 'cacique', war chiefs and medicine men; the other for dealing with all outsiders, including the U. S. government, headed by the "governor". But it is the cacique who decides on such important matters as land allotment within the tribe. All the land "belongs" to him. As men ask for it, he marks off the boundaries. No one "owns" it in our

sense--rather it is communally owned, and parts are used as long as a family needs them, after which they are re-assigned.

How do these gentle, non-competitive people survive in this century? The answer seems to be that their spiritual life is part of whatever they do: working, playing, singing, dancing. No segment of their life is separated from their whole religious tradition. They have held firm to this and have not become fragmented, and according to latest reports are still keeping to their traditional ways. They are not acquisitive or aggressive but feel that life is fulfilled if they have done their duty in clan and family. Material possessions as status symbols are unimportant. Harsh necessity taught them to live with what they have and to use it to its fullest. They had to cooperate to survive. In a harsh environment, man can only survive through cooperation--as the Pueblos, the Bushmen in Australia and the Kalahari. It seems that non-competitive societies occur where life is hard and desperate. As conditions soften, so do habits change.

Sometimes you may visit a strange place hundreds of miles from home and yet find it's not strange, for you immediately feel at home there. So it was when I walked into Acoma, as if I had stepped into a new dimension of life embodying many things I needed but had long since lost: a sense of harmony, of a new idea of time, of a loving acceptance, as if each sun-soaked adobe wall were saying, "Accept us--we accept you".

Margot Ensign

Postscript to "Acoma Indians":

A few days ago it was announced over a national newscast that \$22,000 in federal funds for the school lunch and breakfast program for Pueblo Indian children would be cut off. About the same time it was also announced that we're spend-

ing 4 billion dollars on constructing military tanks. Are machines for death so much more necessary than nutrition of the future people?

Margot Ensign



the presidential election

INTENTIONAL COMMUNITIES AS INFLUENCES FOR SOCIAL CHANGE

In national press coverage of the recent presidential election, no mention has been made of the fact that president-elect Carter is from the same deep south county as Koinonia, Georgia. With Carter's dependence on an overwhelming majority of the nation's black vote, this intentional community must have had a subtle role in the election.

Carter, like Koinonia's founder Clarence Jordan, is a Southern Baptist. Clarence Jordan was expelled from the Baptist church in the county seat of Americus for bringing with him a black person into that church and for integrating the Koinonia community. In those days this was probably the single most critical political and social issue in the county; it led to a candidate for the governorship making opposition to Koinonia an issue in the gubernatorial campaign. Koinonia was boycotted by merchants in the region, its buildings were dynamited and shot at,

the children from Koinonia were given a hard time in the schools, and the community survived through help from the intentional community and racial integration forces over the nation. For example, Highlander in Tennessee took in the Koinonia summer camp. Dorothy Day from the Catholic Worker and Elizabeth Morgan from Yellow Springs joined the community to help it through critical times.

With his farm located not far away in the same county, Jimmy Carter and his family were faced with the challenge of thinking through their positions on the issues of racial justice that were involved in Koinonia. Clarence Jordan's life and Koinonia made it inescapable in the minds of honest Baptists in the area that a Christian with real commitment to following Jesus' teachings must stand for and live by interracial justice and brotherhood. The example of such a life and community acts more on the subconscious mind and the climate of culture than on conscious intellectual reasoning, far beyond what people are intellectually aware of. Just how great this influence was on President-elect Jimmy Carter probably nobody, including Jimmy Carter, can say. Carter's campaign manager, Hamilton Jordan, is a cousin of Clarence Jordan, but Carter and Clarence were not intimate acquaintances. The probabilities are high that Clarence Jordan and Koinonia are part of the background of Carter's presidency. The potential for social pioneering by the well conceived intentional community is illustrated by this piece of current history.

Griscom Morgan



ecology concerns

FROM KOINONIA NEWSLETTER,
Summer 1976, in Americus, Georgia:

Our anxiety grows as we see the world population pass the four billion mark and realize that we ourselves may one day learn what "famine" really means; shouldn't we give thanks that we do have at least a little time left in which to reassess our destruction of the soil-- and to shift to methods based on good stewardship of God's earth?

Our goal in farming at Koinonia is not just to make a profit. Before he even located this particular farm in 1942, Clarence Jordan had announced that a primary objective would be to develop better farming methods that would rebuild the soil rather than merely mining its nutrients. The Koinonia Partners Board of Directors recently reaffirmed that goal, feeling that we could and should take greater risks than most farmers can afford.

"The earth is the Lord's and the fullness thereof"...What are the implications for American agriculture, more importantly, for followers of Jesus involved in American agriculture? Several of us involved in the farming operation at Koinonia became concerned a few years ago that farming in this country was too much concerned with short-term profit and too little concerned about permanent soil fertility and long-range survival of the human race. Previous topsoil is being washed away at alarming rates (the U.S. has less than half the topsoil it had 100 years ago), valuable humus is being burnt out by harsh acid-treated fertilizers, beneficial soil fungi and bacteria are being killed off by ever-increasing doses of weed-killers, insecticides, and harsh fertilizers.

What does this mean for humans? Food adulterated with residues of toxic substances that are being indicted as carcinogens and genetic toxins is one result. Poorer quality food is another. We at Koinonia have set out over the past two years to see if there is an alternative. Is it possible to build the land, to leave it a little better every year? And at the same time to raise nutritious food, to reduce our dependence on harsh poisons and "hot" fertilizers, and yet to maintain good yields and still be a viable business operation? We can't give definite answers to these and other questions yet -- we're still in the transitional stage and will be for several years.

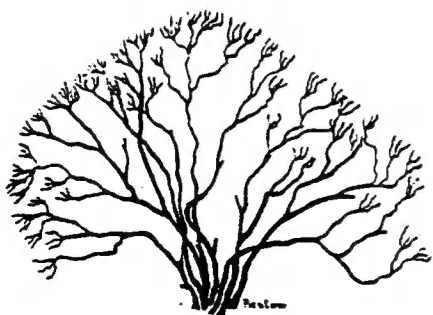
We are alarmed as we see the rate of death from cancer increasing every year in the United States; shouldn't we make the best possible use of our right to learn why that is so, and thank God for the freedom to protest on behalf of our children?

Our interest in these issues caused us to take special note of a program which we feel should be of great concern not only to people of the South, but to all our friends in other parts of the country as well. Early this spring the Georgia Department of Agriculture resumed large scale applications of Mirex, a chlorinated hydrocarbon pesticide, in an effort to eradicate fire ants. Fire ants arrived in this country in 1918 and have been stinging people and building their bothersome mounds ever since. No one denies that they are a pest. We should know: we have our full share of them. But for reasons which are at least partly political, the problem has been exaggerated far beyond reality...

Mirex, however, does appear to be a serious threat to people who live in the South or who eat food produced in the South. Allied Chemical, the original manufacturer of Mirex, shut down its

plant early this year rather than produce more of the chemical because of the great potential for public reaction and law suits resulting from its use. Incredibly, the State of Mississippi bought the patents and took over the production of the chemical! Now its advocates are pushing for repeated and total spraying of the South from high-flying planes until the fire ants are "under control". (Our part of the country was sprayed with Mirex less than three years ago, and Koinonia now has more fire ants than ever.)

Knowing that Mirex was thought by many to be dangerous to humans, we began several months ago to research the matter. With the help of a Congressman we finally secured more than 80 pages of testimony given by scientists before the Environmental Protection Agency over the last three years. After reading these testimonies, it was suddenly obvious why some advocates of Mirex would not want their information made public. Repeatedly their findings led to the conclusion that Mirex was indeed a serious carcinogen and should be withheld from the environment. Based on information such as this, the National Cancer Institute declared that, "The carcinogenicity of DDT, Mirex, and aldrin and dieldrin has been conclusively established after extensive review of research results obtained by NCI, IARC/WHO, and Industry studies".



AS I BREATHE

Stately solid structures
erected by man's ego
represent myself holding
out, against winded time.

Strong backed steel-
reinforced monsters
of mankind's making emit
smokey signals of choking
health dying upon natural
skylines, grey overcomes blue.

Air is our enemy
addictive, the carrier
of soot and the common cold
breathe deeply,
the withdrawal symptoms are fatal.

Jan Kutcher

[Editor's note: For those who did not see our July-October Newsletter, briefly, Raven Rocks is an 800 and some acres of beautiful land near Beallsville, Ohio. It was purchased about six years ago by nineteen men and women, who knew each other at Barnesville Friends Boarding School, in order to save it from being strip-mined. They sell Christmas trees and cement in order to pay off the debt.]

The following edited excerpts about the Christmas tree business, cement business, underground house and Clivus toilet are from the RAVEN ROCKS Newsletter of October 1975.

Raven Rocks wears a changed and an ever-changing look. Christmas tree fields, with trees reaching six, seven, eight feet tall where there were bristling little "bottle brushes" years ago, are barely recognizable now as the fields we purchased. All over the property, the woods and thickets have changed, and so have the cleared and pasture lands set handsomely among them. Woods, pasture, cleared land

or thicket--all show the good effects of a little respect, care and consideration.

The Christmas trees have taken on a fine shape. This last Fall, Christmas tree growers from across the state entered trees in a contest at the Ohio State Fair in which fair attenders were the judge, marking their choices in each of several varieties of trees. Raven Rocks entered a Scotch pine. Among the Scotch pine entries, it won first place. It was a result that cheered 19 amateur tree growers!

From the start we expected our Christmas trees to be the major means of paying for the land. So the quality means a lot to our plans, as does the fact that the trees are now coming to harvestable size in greater numbers. As we expected when we wrote to you in October of '74, sales in that Christmas season were up--to 1,600 trees. This year will see an even bigger jump--to something over 4,000. Then in 1976 and 1977 will come the big years. Snows, bugs and fungi can change all one's plans, so it is no use being too precise with the predictions. So far we've kept ahead of the bugs and fungi, without any kind of chemical program, an accomplishment that means a great deal to us.

So, the trees have grown, and we as tree-growers have improved. This season, for instance, we pruned once, compared to the three runs we made through the fields in 1973 in our efforts to do the job right. A one-run pruning season leaves a lot more time for other things! And, as we hoped might be so when we laid out our original statement of Aims and Purposes, those other things have become an important part of Raven Rocks.

Much of the erosion control work that the property needed was accomplished

in this last year. Most of that was under the power lines, where with financial assistance from Ohio Power Co. we refilled some areas, graded, limed and planted seed. Mulching helped get the new green cover off to a good start.

Ted Cope rescued tons of topsoil from the grading operations of his crew on the Wayne Township roads. This along with sludge from nearby town sewage plants has been used to further improve Raven Rocks soil. Ted has also completed the first of two permanent spring developments in the pasture tracts. We are still experimenting with and evaluating the use of cattle in Christmas tree fields as a substitute for part of the annual mowing, thus reducing fuel and labor demands while producing grass-fed beef...

Herb Smith did the biggest part of a limbing project in stands of reforestation pine. Another part of our continuing reforestation effort was the planting of 500 red oak and 500 walnut. By keeping some lands cleared near old seed trees, and by other means still being investigated, we hope to encourage the natural spread of tulip poplar, along with oak, hickory, ash and other hardwoods...

Raven Rocks Concrete, the elder of the member-owned businesses, has enjoyed a healthy second year. The Sidwells added a second Concrete-Mobile mixer truck to the operation, as planned. So far, sales have run double the level of the first year. Right now, Raven Rocks Concrete is delivering near 1,000 yards in one job for North American Coal Company at its nearby Number Six mine, a deep mining operation. The concrete encases the water outlet system for a giant slurry dam which will be constructed of earth, 135 feet tall. The dam will retain water used in processing coal till polluting wastes can

settle out. For our two-truck operation, the demands of this job are heavy. To be able to meet them, we have set up a second loading plant at the mine. When the job is finished, the equipment will be moved to Clarington for our permanent plant there. To expedite this move, we have made the second plant a portable one, unlike the first set-up at Beallsville...

THE KANSAS CITY HOUSE

The Kansas City House has taken a major turn--to the South.

In last year's letter, we reported that it was the judgment of our solar energy advisors that, had the building faced South instead of East, it might gather and store enough energy from the South exposure itself to make a central heating system unnecessary... With the rapidly expanding experience and research in the solar energy field, with the evolution of our own knowledge and that of our advisors, it became clear that we should turn the building South. We should take the peculiar combination of a concrete structure, located underground and insulated from the ground, and carry its innovations this one further and most significant step. It also became clear that at the same time we should change the design in order to take fuller advantage of the solar potential of the structure. We should increase the ratio of window area to floor space. The two changes--in direction and in design--would not only let us abandon the central heating system of the conventional house, but would also let us abandon the solar collectors and the storage system of the typical solar house. Our collection devices would be the windows and skylights; our storage, the house itself.

The evolutionary sequence since we

started the Kansas City House has been interesting. We started with the decision to put the house under ground in order to save the landscape and natural earth cover. A massive structure became necessary to sustain the weights, with concrete and stone the logical materials. We discovered next the necessity for insulation, and were guided by the aesthetic preference of our architect, Malcolm Wells, to put that insulation on the outside, keeping the concrete exposed on the inside. This situation led to our discovery that we had arrived at an exceptionally good base for solar energy use. We had provided a mass of concrete and stone, already insulated from heat loss, and this mass would be so great that solar energy could be stored without the addition of special storage systems and spaces. Moreover, that great mass would have so much storage capacity that it could store all the heat we would need without the use of high temperatures. Windows, therefore, would do as collectors. With storage being made at low temperatures, windows would be useful even on cloudy days, when special collectors tied to storage systems requiring high temperatures would not.

So, we had arrived at a situation that suggested our next step: increase the window area, turn those windows to face the South sun of Winter, and achieve a new kind of Solar House.

It took us this last year to get under the full weight of the further advantages that might result from trying this new kind of Solar House. To be able to dispense with the central heating system is an exciting possibility. Now we know the excitement of trying to gain solar energy while dispensing with the collectors and storage systems which typically encumber that approach with their demand for funds, space and maintenance.

Re-location and re-design seemed more than warranted. Malcolm Wells, therefore, has begun the architectural re-design. We are now settling the matter of location.

It may be fair to say that we are trying to do with a house what the inventors of the Clivus have done with sewage disposal--to improve upon basic and well-known principles and practices, and put together bits of common knowledge in new combinations in an attempt to solve some very big problems. We are glad to avoid the space age approach.

CLIVUS TOILET

The bathroom at the Roscoe Crum house has created exceptional excitement. That is because it has, instead of a flush toilet, a Clivus Multrum, the Swedish composting toilet. Three years ago we had purchased one of the first ten Clivus toilets shipped to this country from Scandinavia. We expected then to install it in the new underground house. But, with the delays encountered in that project, we decided to put this first unit into the Roscoe house. By the time the Clivus had been in operation a week, we were already impressed and pleased. Its capacity to convert toilet and kitchen wastes into garden-safe fertilizer attracted us in the beginning, along with the fact that its operation eliminates a major household demand upon the earth's dwindling water supply and reduces the need for public sewage or private septic systems. After being asked countless times by interested persons if the Clivus would be "smelly", we find that its natural drafts actually keep odors out of the house in a way the conventional toilet can't do. So, this ecologically advantageous substitute for the flush toilet may turn out to be a more pleasant substitute as well.

THE CLIVUS TOILET AT THE FEINSTEIN RESIDENCE, Yellow Springs, Ohio

Since we installed the toilet in the Spring of 1973, we have been using the system constantly with few problems. The main problems are the ventilation system and the insect problem which are interrelated. Ideally, if the bio-mass is hot enough and you have a sufficiently tall chimney to insure a constant strong draft, you will always have air going through the system (keeping it aerobic) and keeping to a minimum any odor at all. Practically, however, there are many things which detract from a good draft. The first is that we only have a six foot chimney above the roof of the house. Secondly, there are often thermal inversions and freak winds at times of the year which cause any chimney to blow back a little. Thirdly, if you have the intake air vent for the system in your living quarters there will be competition for the air going in. Furnaces and fireplaces will draw air away. So it is best to locate the air vent in a basement or crawl space, much the same way that you should for any large fire place that needs its own fresh air supply. These problems could be kept to a minimum if there was a small duct fan on the chimney to insure positive ventilation at all times. If you had this you would also discourage the smaller insects, (which go right through fine mesh screens) from coming through the chimney. However, you always have the problem of putting insects into the Clivus. Since it is a good rich breeding ground any insect in there will multiply. This really only presents a problem at canning time when we put large amounts of tomato, etc. down the hatch, which probably had fly eggs on it. I think it a good idea to put large volumes of food waste on a separate compost pile.

The bottom line of this story is that we

did have a bad fruit fly problem this year for the first time and consequently stopped using the Clivus for a few months to see if it would go away. Our plan is to empty it out, which we have never done yet, and start over again. I think with proper planning and experience from people who have used the system over a period of time the system can be made to work quite nicely. The point is that it is not fool proof, so you must use good common sense with the system.

Paul L. Feinstein

These excerpts are from the Raven Rocks Newsletter dated October 22, 1976: THE CHRISTMAS TREE BUSINESS

In less than a month we will begin to harvest Christmas trees for sales which begin in early December in Columbus, Wheeling and Bridgeport. Pruning of Norway spruce was completed quickly in one day this month leaving a little more time for equipment readiness and the other numerous chores that go into a tree selling season.

Pruning of the Scotch pine went smoothly this year - it seems the more experienced we get the less hassle the job becomes, though it lasted a busy five weeks. During our annual Work Week late in June "Rockers" from Celo joined the Ohio residents to make a concerted effort, mowing and pruning. To enhance the enjoyment and the efficiency of the group effort that week, one of us cooked noon and evening meals for all the others, who were able then to work steadily in the fields. When we gathered for good hot food, we shared also news, enthusiasm, philosophical interests and perhaps frisbee or blow-the-spool-off-the-other-side-of-the-table!

The ladies who operate the Storck bakery outlet in Wheeling, where we have sold trees for the last four years, have been most enthusiastic supporters. They happily promote our wares among their customers, on occasion making tree sales when we've not arrived yet in the morning and eagerly checking throughout the day to see how we're doing. At the Bridgeport stand we made friends the last two Decembers with a 12 year-old boy who appeared, helping to sell, unload trucks, carry trees for customers, cheerfully volunteering his after-school hours. To say thanks to these folks we invited them and their families to a June picnic at the Rocks.

Last year, after a very busy harvest in late November and early December which produced about 4,000 Christmas trees, John Morgan, Paul Cope, and Herb Smith from Celo, along with Chris Joyner, formed the backbone of the sales force at our tree lots in Bridgeport and Wheeling. Don Hartley, Tim Starbuck and Warren Stetzel returned to Great Southern Shopping Center in Columbus to operate a successful outlet for Raven Rocks trees. New, large, but tasteful signs and/or improved lighting at all three stands helped us sell out nearly a week before Christmas the 2500 trees we had held for retail. (We project a '76 harvest that may reach 8,000 trees, roughly half to be retailed and half wholesaled.) We had many repeat customers at all three stands, folks commenting, "Oh, I buy my tree here every year!" as if they'd done it all their lives! Word of mouth seems to be our best advertising, though a few brief TV ads in Wheeling help folks identify us.

THE UNDERGROUND HOUSE

Our letter last year detailed reasons for abandoning the design and the location for the original underground

house, what we called The Kansas City House. Now, excavation has begun on a new site for an entirely redesigned structure.

The project was re-located on a hill-top north of and overlooking the parking lot at the First Ravine. In this location, the house will be more visible and much more readily accessible to interested persons. It will be possible for visitors to see the house without so much effect upon the remainder of the property and other residents here.

The new design has achieved an almost total solar heating ability. It has done this with window glass as collectors, and with the mass of the building itself as the major storage system. Only back-up wood burners will be needed for occasional situations when the solar heat may not be quite sufficient or when a higher temperature is desired in a specific space within the house. One of these wood burners will be a modern version of the old wood cookstove, a very handy and comfortable thing when a little extra heat is wanted along with a hot supper.

Two other major additions to the appearance and usefulness of the building evolved as we followed the dictates of the site and of our solar heating intention. First, two greenhouses stand backed to the south face of the building, one at each end of the first floor. They contribute heat and light to the house in the daytime, and at night enjoy sufficient back-up warmth from the mass of the house to make nighttime heating unnecessary. At one end of the building, the living room shares one whole wall with a greenhouse, a glass wall that will let us look out on a garden of tomatoes and greens through the cold months. On the other end, the exhaust of hot moist air from the clothes drier will be blown into the greenhouse there,

making that unit better for plants that like a little more heat and humidity. Our intent is to raise winter vegetables, reducing still further our dependence upon trips to town and upon food that has already travelled across-country before that.

The second big addition is an integrated wind energy system. We had for some time been excited by the potential of a wind system which used a ducting or focussing device. As the solar design of the house evolved, it became increasingly clear that the house itself was taking on a shape that made it a duct. That is because the face of the house slopes very much as a hill does. Winds increase in speed and energy as they rise up such a slope. That energy can be captured and further increased if one "caps" a space above the slope, so to speak.

We decided to try the wind duct. The final design has as one of its most dominant and dramatic features a giant wing, as it were, mounted eleven feet above the peak of the house itself. This "caps" the slope of house and hill, and will at a minimum double wind speeds. A wind doubled produces eight times as much energy.

In winter especially, when winds are strong, the house will be independent for its electric supply. Moreover, it is likely that wind energy surplusses will be sufficient in winter to permit nighttime lighting of the greenhouses. This will boost vegetable production and contribute to nighttime heat needs.

We are delighted with the potential of this new building. We are excited to have begun excavation, and look forward to the first good weather of spring to begin construction itself. What pleases us as much as anything is the fact that our decision to give up the other very handsome design and loca-

tion has resulted in a design that all but a very few consider a major improvement over the original.

Set between two wedges of trees as it will be--the trees further contribute to the wind focussing effect--the house will rise like a contemporary castle in the woods. Its tree setting has led to a new name: the Locust Hill House. Trees, by the way, still will stand on the roof of this structure, as on the original, with the exception of the space required for the wind generators. And one further note about our top-side: the hollow top of that giant wing "cap" above the wind duct will gather and hold 14,000 gallons of rain water, ready with gravity pressure for use in irrigation, fire fighting, or whatever we may need. The prediction is that the ducks will use it, too.



THE NEW SCHOOLS EXCHANGE COMMUNITY near Pettigrew, Arkansas

They invite new members, suggest a pre-planned visit first. Located on a 200 acre mountaintop farm in the Boston Mountain Range of Arkansas, the wilderness region of the Ozarks, New Schools Exchange is a national clearinghouse for alternative education and is expanding to focus also on community education; it publishes the New Schools Exchange Newsletter 10 times yearly. It is a non-profit working foundation with no salaried staff for the past three years.

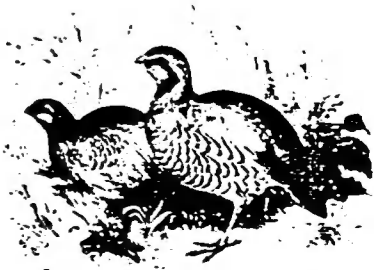
Shanti Gardens is their diversified farming operation with fruit, bees, hay and small herd of livestock. They produce more than 80% of their food. Staff dwellings are also diversified. At the weekly

management meetings decisions are made democratically. These decisions are implemented by area managers. We quote now from some of their aims set out in the information sheet:

We do all of this because we believe substantial changes in our lives are necessary if we are to survive as a people. We have a strong commitment to building a life which offers valuable work, a healthy environment (both physical and social) and an enlightened human organization to those we work and live with. . . . We are well accepted in our community, have won considerable respect nationally for our work in education. . . . We are still not able to offer salaries although this is a major concern. . . . If your dream is to create a new world of the sort that we have outlined please consider joining us, we sure can't do it alone.

We are a work-oriented cooperative rather than a commune. . . . We plan to build solar and wind power into all new and some existing structures. (Blueberries are entirely irrigated by wind and gravity power.) We are oriented toward spiritual and personal growth but follow no established church. We presently range in age from 21 to 31 with one 2 year old. We ALWAYS have a need for people who can productively contribute during seasonal periods. Our life is challenging and rewarding, we like it and think that you might also.

For further information write: New Schools Exchange, Pettigrew, Arkansas, 72752



REVIEW

Alternative Sources of Energy, Route 2,
Box 90A, Milaca, Minnesota 56353;
\$5/4 issue subscription.

A quarterly whose major emphasis is in reaching "people concerned with the development of alternative technologies for a decentralized society. Emphasis is on alternative environmental technologies in energy sources, agriculture, architecture, transportation and communications; and the synthesis of old and new technologies".

Alternative Sources of Energy is an extremely readable publication whose articles are enhanced by clearly drawn diagrams and photos of alternative energy systems. Topics in one issue were: Nitrogen Fertilizers, Solar Energy Windmills and Solar Coop Drier. Also included is a list of courses, conferences, and exhibitions on alternative energy.



Peter Hill is no longer on our staff. His current address is: 4609 Spruce, Philadelphia, Pa. 19139. Our staff now consists of Margot Ensign, Jan Kutcher, Griscom and Jane Morgan. Jean Ramey and Mary Alexander give capable help in the bookkeeping and typing departments respectively.

We welcome letters to the editor and/or articles on the subjects of how people are improving the health, education, work opportunities and cultural aspects of their communities. An article should be between 500 to 1000 words. If we use it we will take the responsibility of editing it. If you wish it back, please send a stamped, self-addressed envelope.

MEMBERSHIP is a means of supporting and sharing in the work of Community Service. The \$10 annual fee includes a subscription to our NEWSLETTER and COMMUNITY COMMENTS. A subscription alone is \$5/year. COMMUNITY SERVICE, INC. is a non-profit corporation which depends on contributions so that it can offer its services freely to those who need them. All contributions are appreciated, needed, and are TAX DEDUCTIBLE. Overseas subscriptions are \$7/year.

MEMBERSHIP RENEWALS

You can tell when your membership expires by looking at the three-digit number at the upper right hand corner of your mailing label. The first two digits are the month and the last is the year. Please renew before that date. If you have renewed or there is some discrepancy, please let us know.

CONSULTATION

Community Service makes no set charge for consultation services formal or informal, but can only serve through contributions and memberships of its friends and those it helps. Our budget is at present \$18,000 a year. We could do more if we had a \$24,000 yearly budget. For consultations we suggest a minimum contribution equal to that of the user's hourly wage for an hour of our time.

COMMUNITY SERVICE NEWSLETTER

is published five times a year. Community Service is devoted to the promotion of the small community as a basic social institution.

YOUR MAILING ADDRESS AND BILLING

If there are errors on your mailing label or in our billing, please send the old label, plus corrections, and the facts of prior billing to us.

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